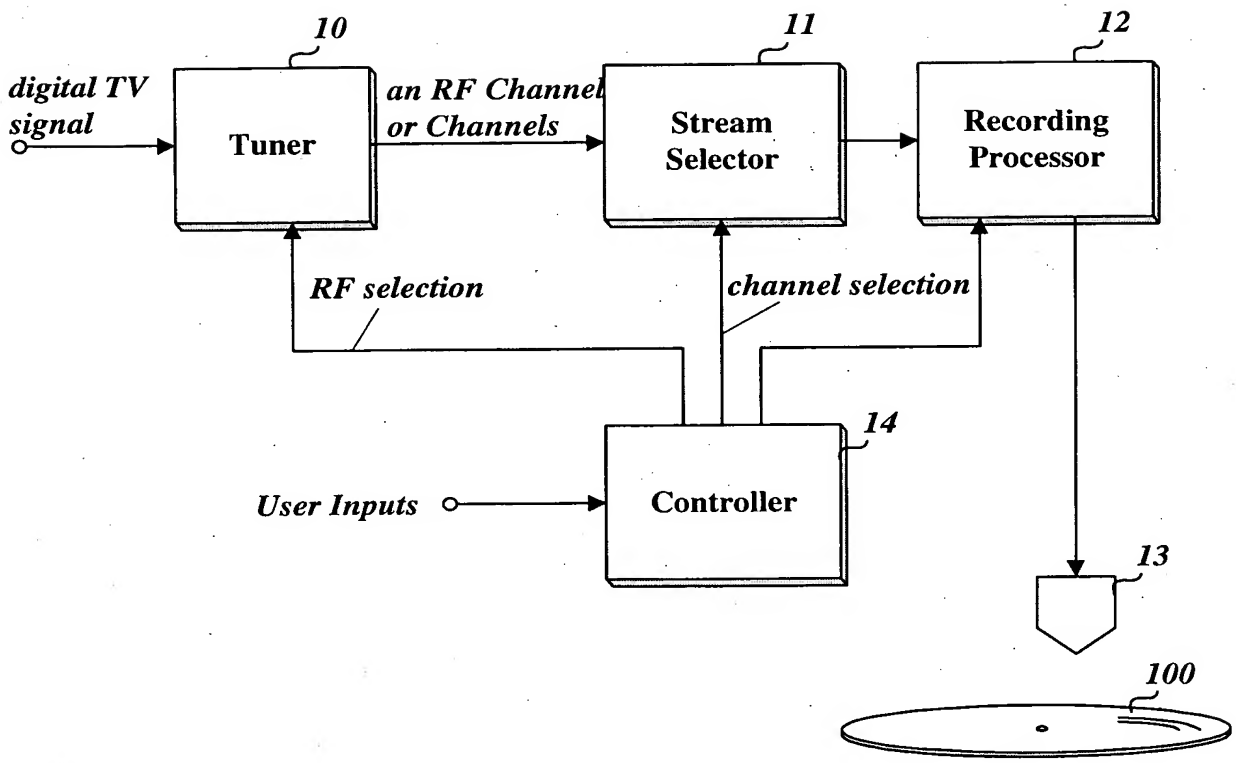
FIG. 1


10
11
12
digital TV signal
Tuner
an RF Channel or Channels
Stream Selector
Recording Processor
RF selection
channel selection
14
User Inputs
Controller
13
100

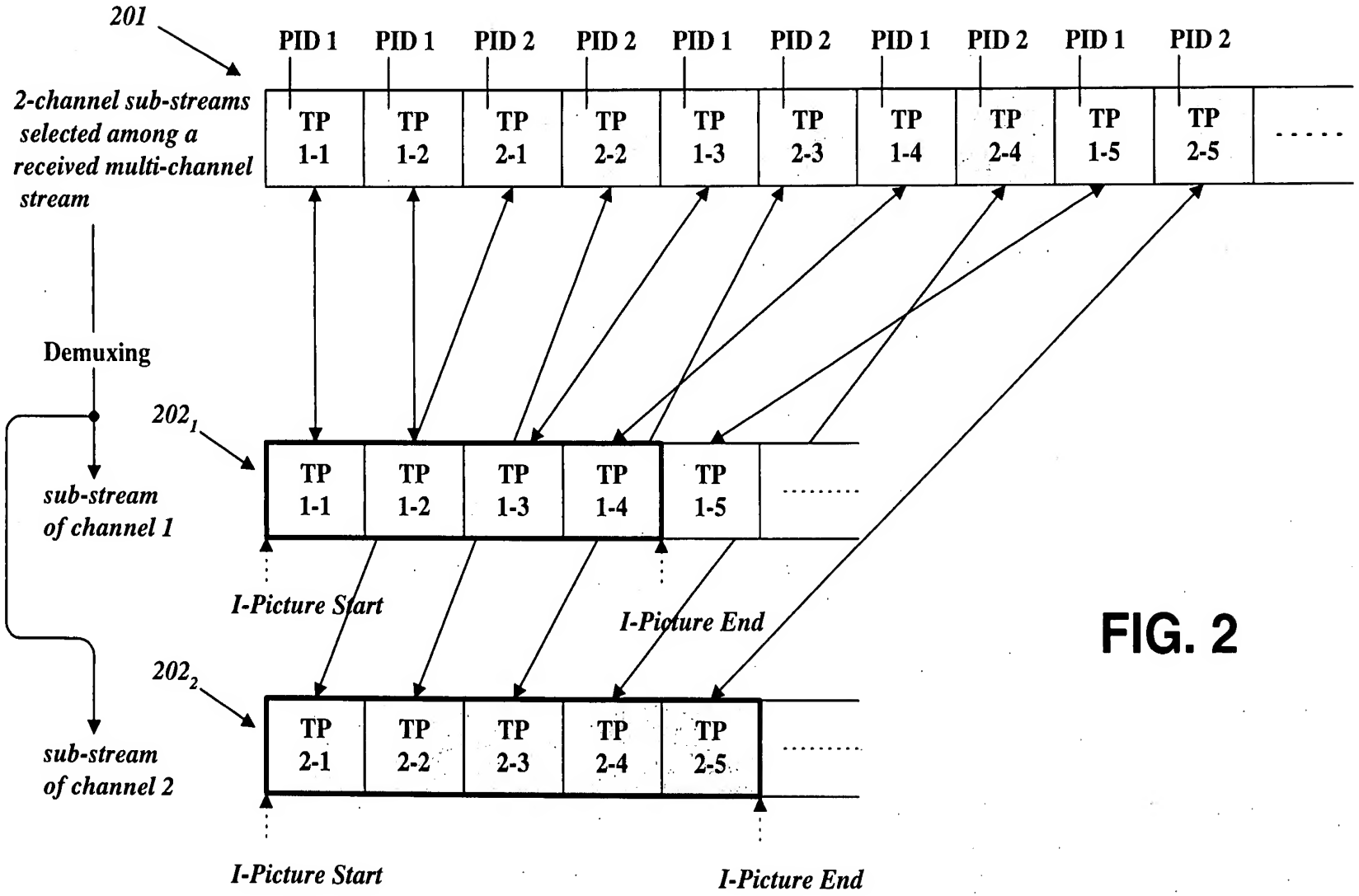

201
PID 1
PID 1
PID 2
PID 2
PID 1
PID 2
PID 1
PID 2
PID 1
PID 2
2-channel sub-streams selected among a received multi-channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
Demuxing
202₁
sub-stream of channel 1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-5
I-Picture Start
I-Picture End
202₂
sub-stream of channel 2
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-5
I-Picture Start
I-Picture End

FIG. 2

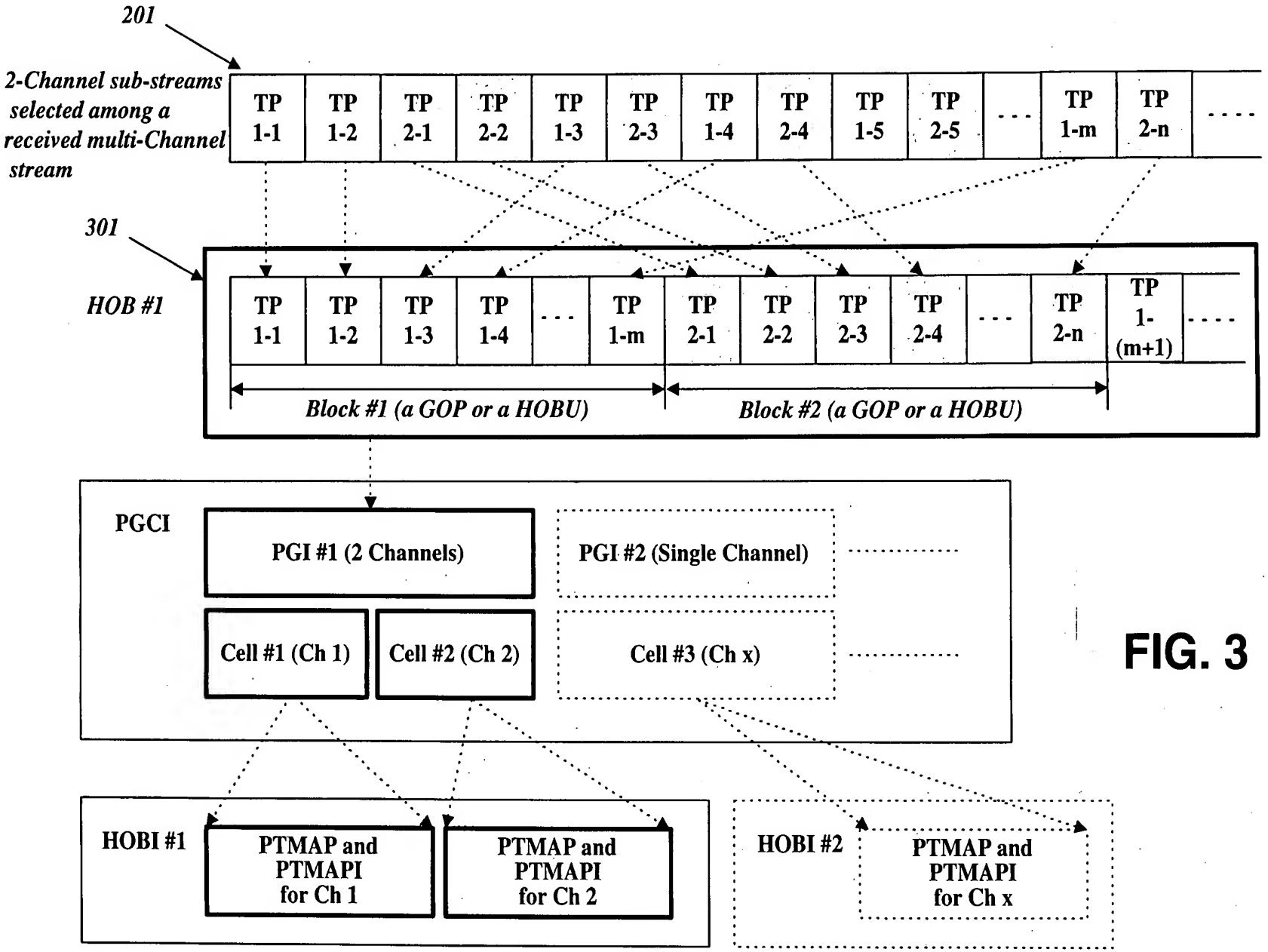

201
2-Channel sub-streams selected among a received multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (2 Channels)
PGI #2 (Single Channel)
Cell #1 (Ch 1)
Cell #2 (Ch 2)
Cell #3 (Ch x)
HOBI #1
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 3

FIG. 4

PGC Information # i (PGCI # i)

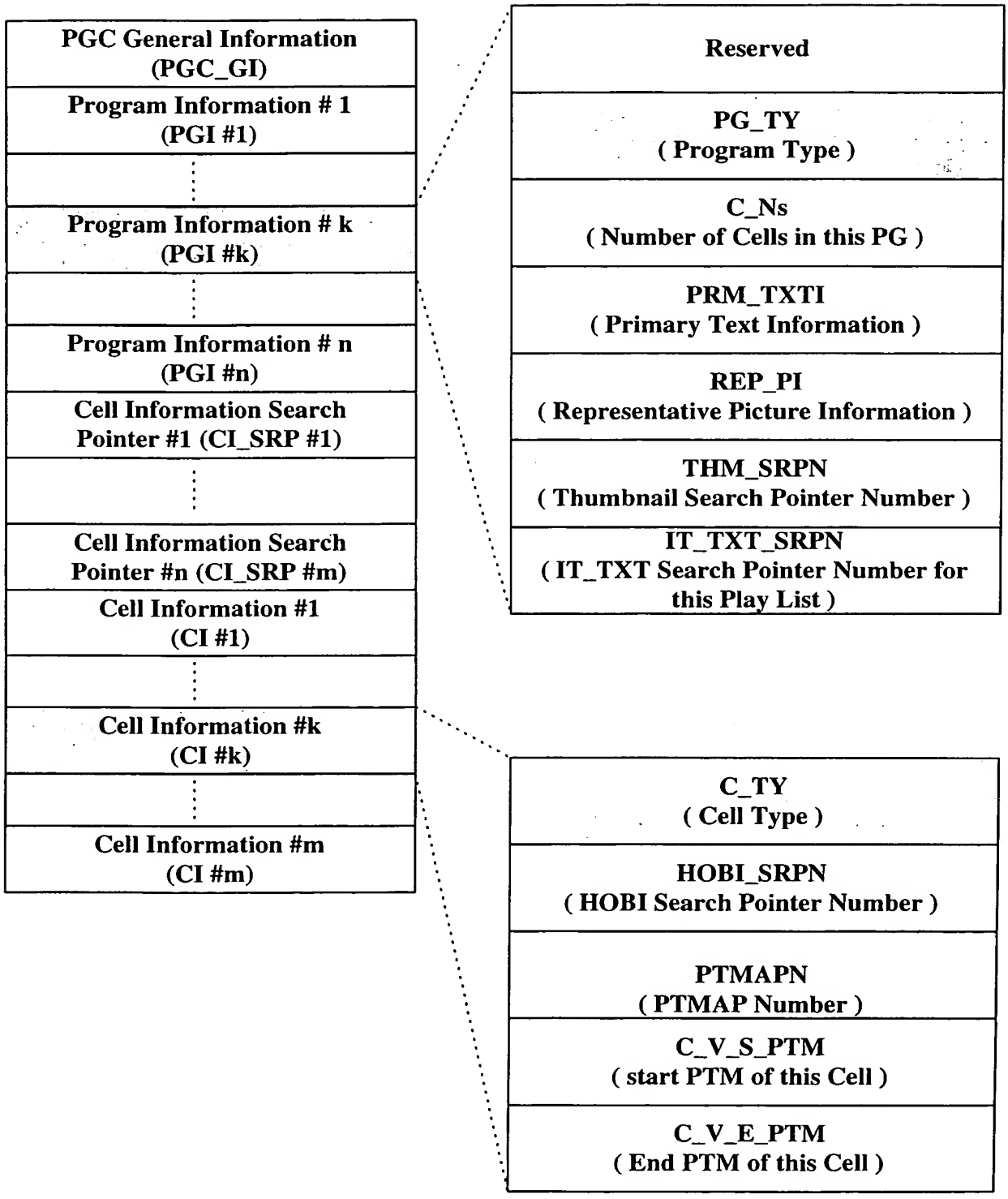


FIG. 5

Program Type

b7	b6	b5	b4	b3	b2	b1	b0
Protect	S/M	Channel_Ns			R_CH_N		

Protect ---------- *0b : This PG is not in protected state*
1b : This PG is in protected state

S/M ---------- *0b : This PG has single-channel stream*
1b : This PG has multi-channel stream

Channel_Ns ---------- *Number of broadcast digital channels referred by this PG*

R_CH_N ---------- *broadcast RF channel number referred by this PG*

FIG. 6

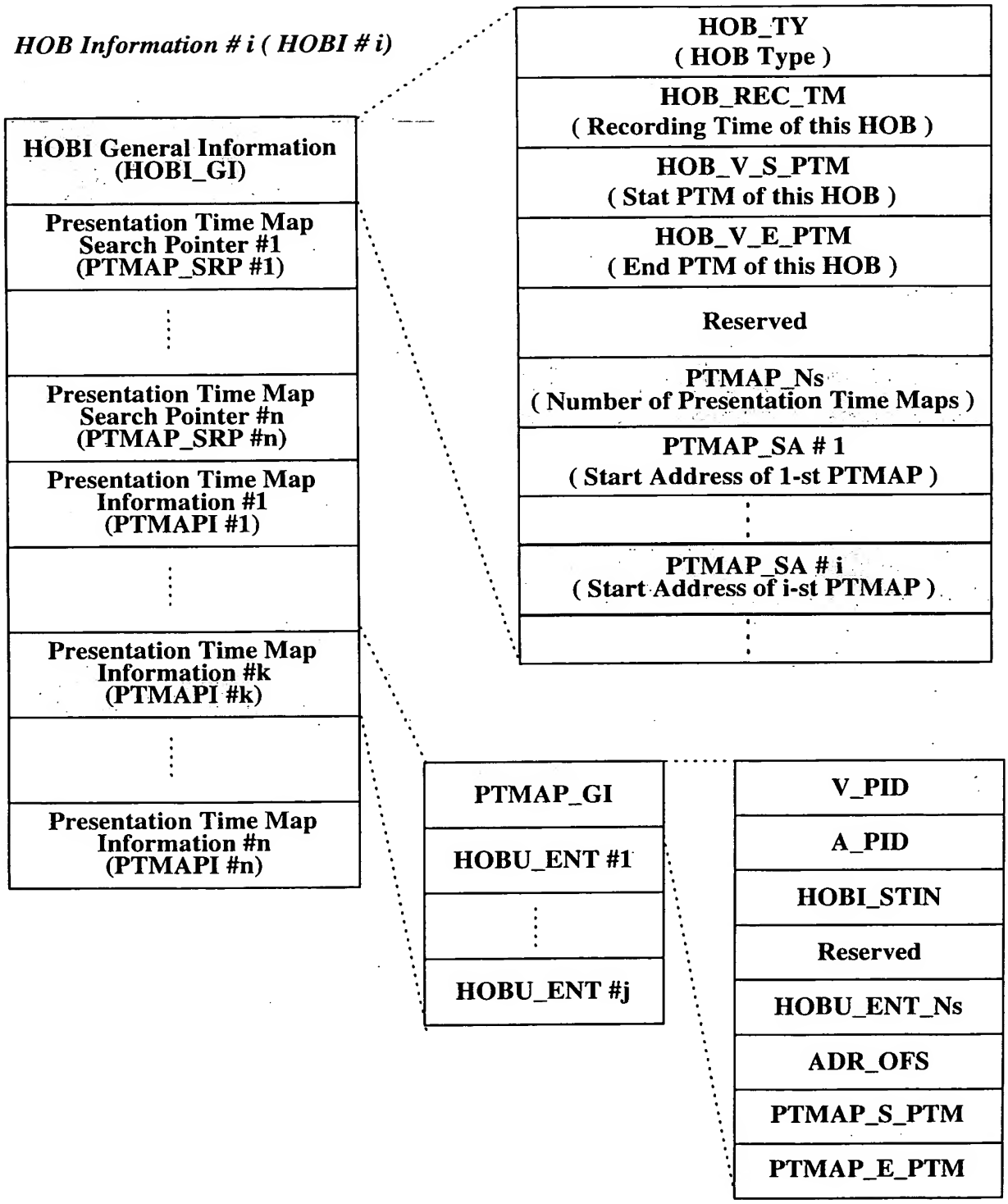
Cell Type

b7	b6	b5	b4	b3	b2	b1	b0
C_TY1		Reserved			C_CH_N		

C_TY1 ---------- *single/multiple channel*

C_CH_N ---------- *broadcast digital channel number referred by this Cell*

FIG. 7


HOB Information # i (HOBI # i)
HOBI General Information (HOBI_GI)
Presentation Time Map Search Pointer #1 (PTMAP_SRP #1)
Presentation Time Map Search Pointer #n (PTMAP_SRP #n)
Presentation Time Map Information #1 (PTMAPI #1)
Presentation Time Map Information #k (PTMAPI #k)
Presentation Time Map Information #n (PTMAPI #n)
HOB_TY (HOB Type)
HOB_REC_TM (Recording Time of this HOB)
HOB_V_S_PTM (Stat PTM of this HOB)
HOB_V_E_PTM (End PTM of this HOB)
Reserved
PTMAP_Ns (Number of Presentation Time Maps)
PTMAP_SA # 1 (Start Address of 1-st PTMAP)
PTMAP_SA # i (Start Address of i-st PTMAP)
PTMAP_GI
HOBU_ENT #1
HOBU_ENT #j
V_PID
A_PID
HOBI_STIN
Reserved
HOBU_ENT_Ns
ADR_OFS
PTMAP_S_PTM
PTMAP_E_PTM

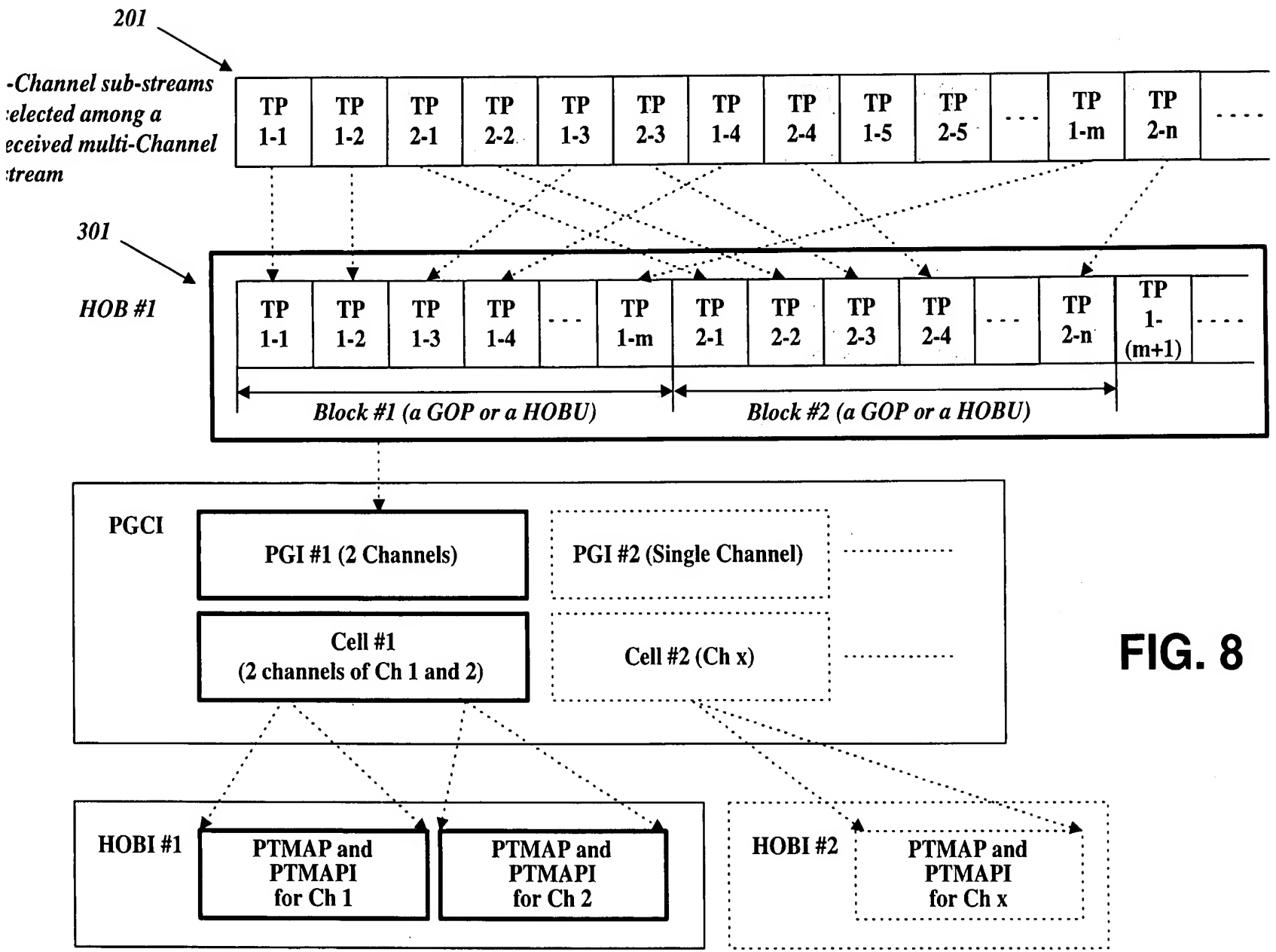

201
-Channel sub-streams
elected among a
eceived multi-Channel
tream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (2 Channels)
PGI #2 (Single Channel)
Cell #1
(2 channels of Ch 1 and 2)
Cell #2 (Ch x)
HOBI #1
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 8

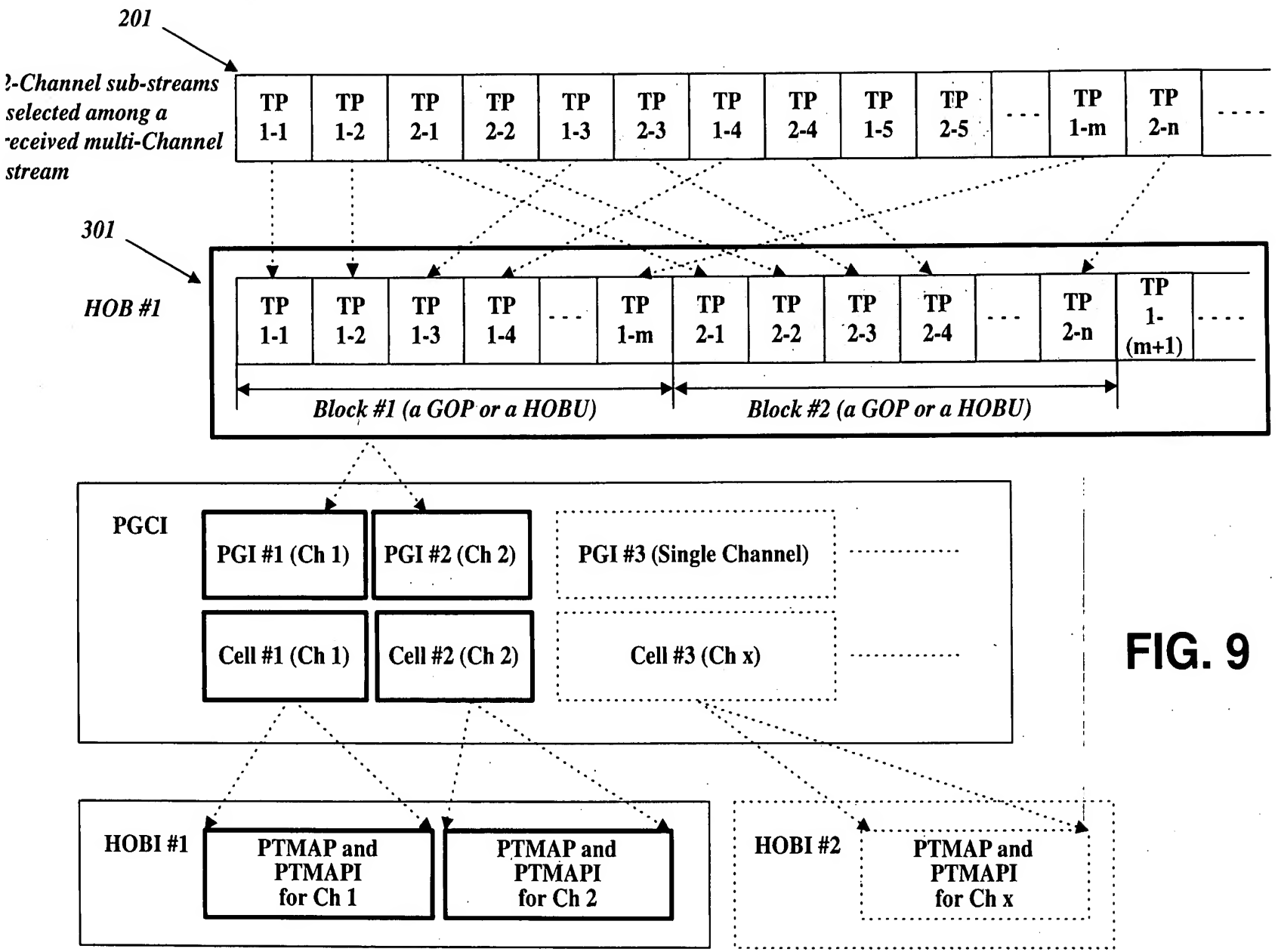

201
?-Channel sub-streams selected among a eceived multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (Ch 1)
PGI #2 (Ch 2)
PGI #3 (Single Channel)
Cell #1 (Ch 1)
Cell #2 (Ch 2)
Cell #3 (Ch x)
HOBI #1
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 9

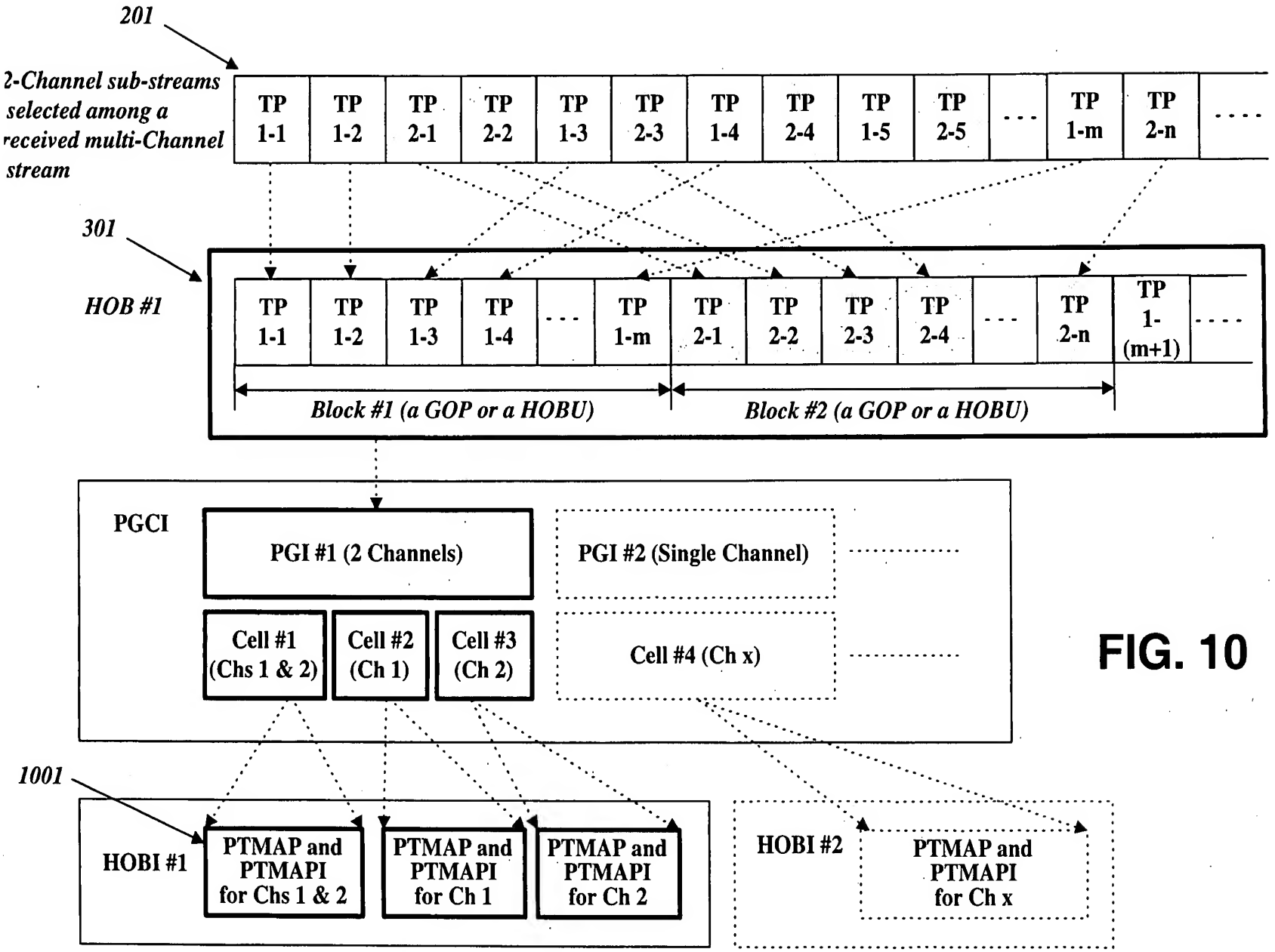

201
2-Channel sub-streams selected among a received multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (2 Channels)
PGI #2 (Single Channel)
Cell #1 (Chs 1 & 2)
Cell #2 (Ch 1)
Cell #3 (Ch 2)
Cell #4 (Ch x)
1001
HOBI #1
PTMAP and PTMAPI for Chs 1 & 2
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 10

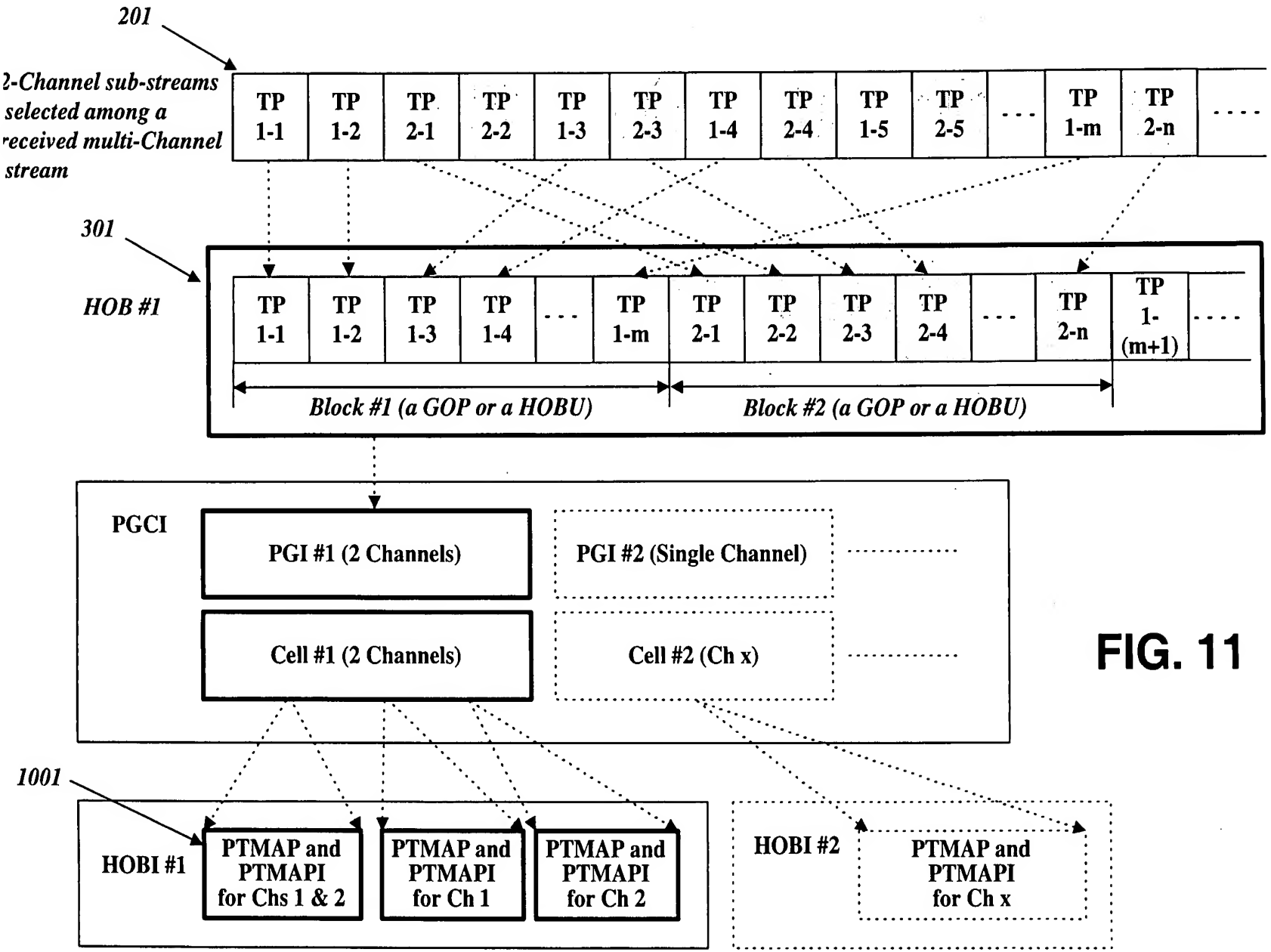

201
2-Channel sub-streams selected among a received multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (2 Channels)
PGI #2 (Single Channel)
Cell #1 (2 Channels)
Cell #2 (Ch x)
1001
HOBI #1
PTMAP and PTMAPI for Chs 1 & 2
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 11

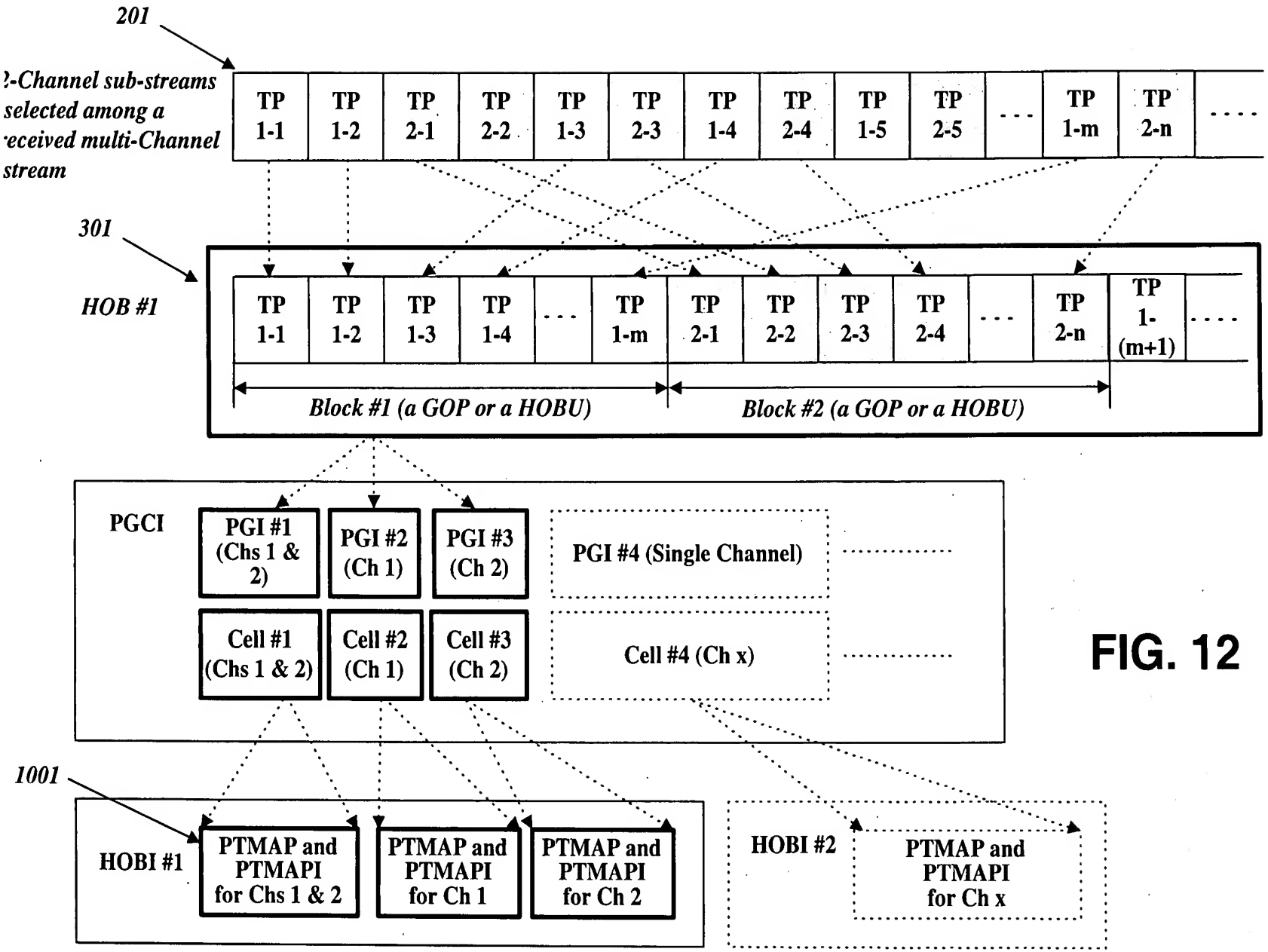

201
?-Channel sub-streams selected among a eceived multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (Chs 1 & 2)
PGI #2 (Ch 1)
PGI #3 (Ch 2)
PGI #4 (Single Channel)
Cell #1 (Chs 1 & 2)
Cell #2 (Ch 1)
Cell #3 (Ch 2)
Cell #4 (Ch x)
1001
HOBI #1
PTMAP and PTMAPI for Chs 1 & 2
PTMAP and PTMAPI for Ch 1
PTMAP and PTMAPI for Ch 2
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 12

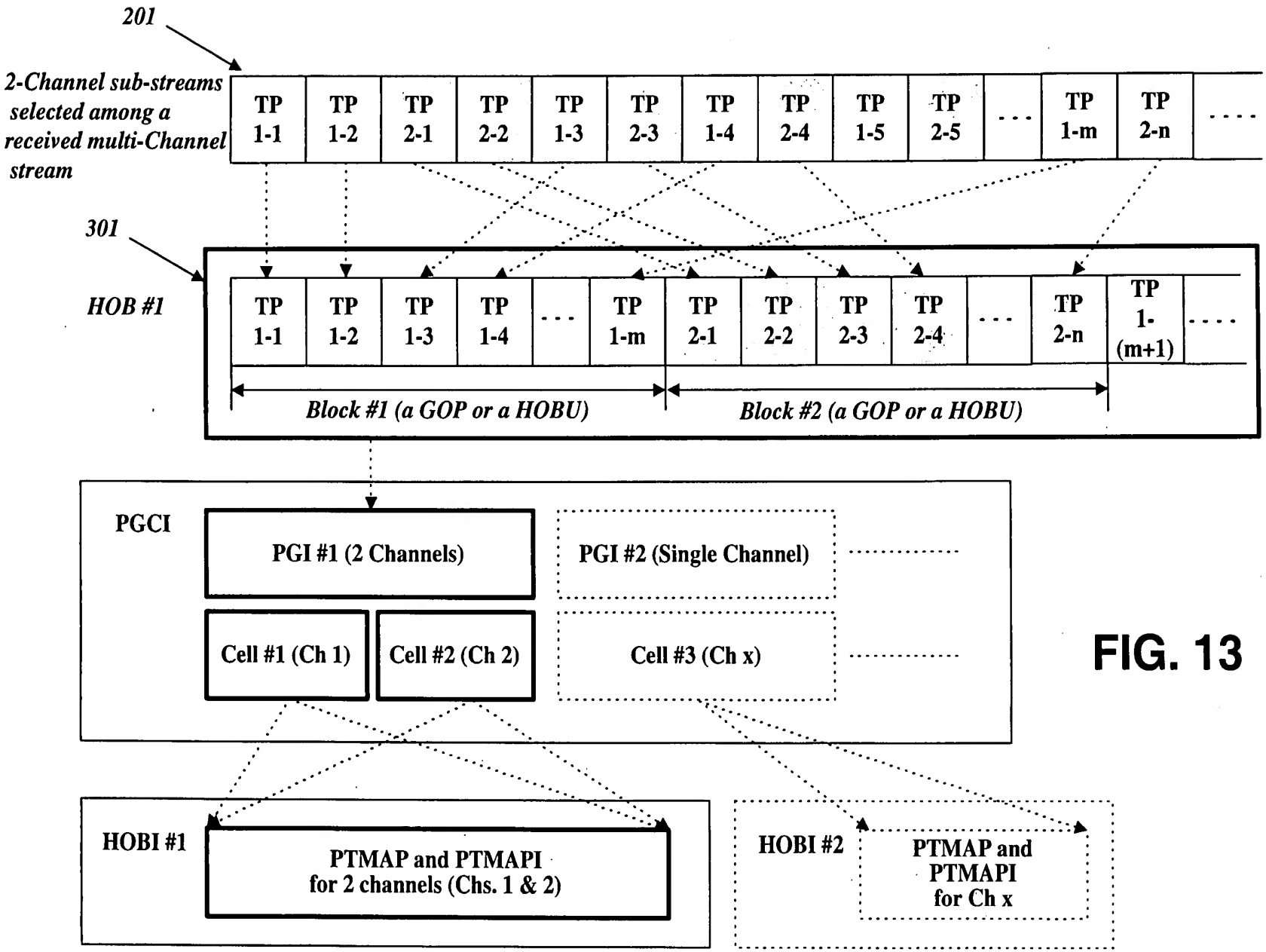

201
2-Channel sub-streams selected among a received multi-Channel stream
TP 1-1
TP 1-2
TP 2-1
TP 2-2
TP 1-3
TP 2-3
TP 1-4
TP 2-4
TP 1-5
TP 2-5
TP 1-m
TP 2-n
301
HOB #1
TP 1-1
TP 1-2
TP 1-3
TP 1-4
TP 1-m
TP 2-1
TP 2-2
TP 2-3
TP 2-4
TP 2-n
TP 1-(m+1)
Block #1 (a GOP or a HOBU)
Block #2 (a GOP or a HOBU)
PGCI
PGI #1 (2 Channels)
PGI #2 (Single Channel)
Cell #1 (Ch 1)
Cell #2 (Ch 2)
Cell #3 (Ch x)
HOBI #1
PTMAP and PTMAPI for 2 channels (Chs. 1 & 2)
HOBI #2
PTMAP and PTMAPI for Ch x

FIG. 13